

Sine encoders

Blind hollow shaft $\varnothing 20$ to $\varnothing 27$ mm

1024, 2048 sinewave cycles per turn

ITD 42 A 4 Y141



ITD 42 A 4 Y141 with blind hollow shaft

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 90 mA
Sinewave cycles per turn	1024...2048
Sensing method	Optical
Output frequency	≤ 180 kHz (-3 dB)
Output signals	A, B, 0
Output stages	SinCos 1 Vpp

Features

- Encoder with blind hollow shaft $\varnothing 20$... $\varnothing 27$ mm
- Max. 2048 sinewaves cycles per turn
- Sine output signals 1 Vpp
- Stainless steel design (1.4305)
- Mounting by torque support
- Cable output radial

Optional

- Cable with connector

Technical data - mechanical design

Size (flange)	$\varnothing 89$ mm
Shaft type	$\varnothing 20$ mm (blind hollow shaft) $\varnothing 27$ mm (blind hollow shaft) $\varnothing 25$ mm (blind hollow shaft) $\varnothing 22$ mm (blind hollow shaft)
Motor shaft tolerance	0.25 mm axial 0.1 mm radial
Mounting kit	081
Protection DIN EN 60529	IP 66
Operating speed	≤ 2500 rpm
Starting torque	≤ 0.02 Nm (+20 °C)
Materials	Housing: stainless steel Shaft: stainless steel
Operating temperature	-20...+85 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 30 g, 11 ms
Connection	Cable 1 m
Weight approx.	1850 g

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Part number

ITD 42 A 4 Y141			NI	KR1	S		IP66	081
								Mounting kit
								081 Mounting kit 081
								Protection
							IP66	IP 66
								Blind hollow shaft
							20	ø20 mm
							22	ø22 mm
							25	ø25 mm
							27	ø27 mm
								Operating temperature
					S			-20...+85 °C
								Connection
								KR1 Cable 1 m, radial
								Output signals
			NI					A+, A-, B+, B-, N+, N-
								Voltage supply / signals
					M			5 VDC / sine 1 Vpp
					S			8...30 VDC / sine 1 Vpp
								Sinewave cycles - see table

Sinewave cycles

1024	2048
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Sine encoders

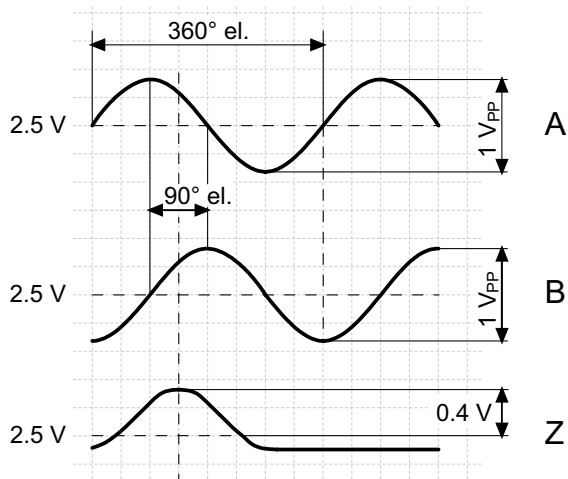
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Output signals

Clockwise rotation when looking at the mounting side.



differential signals

Terminal assignment

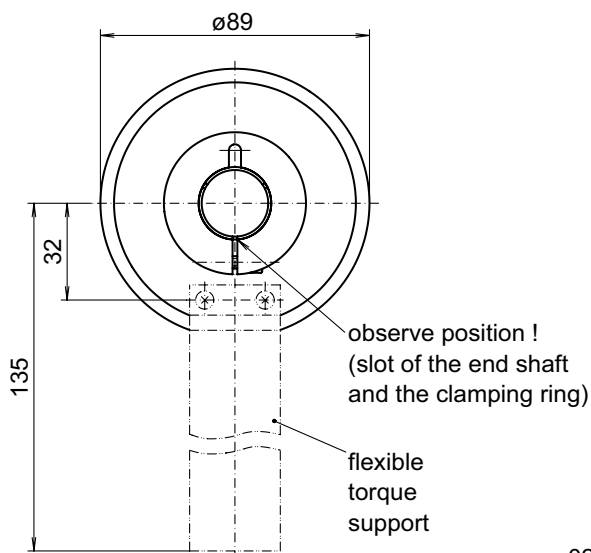
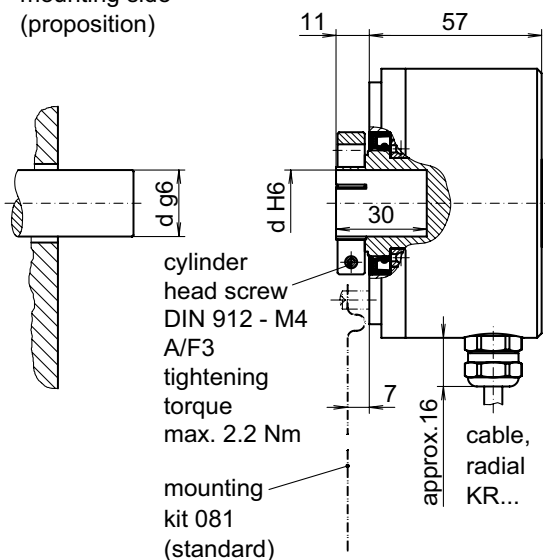
Core colour	Assignment
green	Track A +
yellow	Track A -
grey	Track B +
pink	Track B -
brown	Track N +
white	Track N -
red	UB
blue	GND
violet	UB-Sense
black	GND-Sense
transparent	Shield/Housing

Output signal level

Outputs	Sine
Output amplitude A + B	1 V _{PP} at Z ₀ = 120 Ω
Output amplitude N	approx. 0.4 V (useable part) at Z ₀ = 120 Ω

Dimensions

mounting side
(proposition)



026- 5 Y141

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